

Put each polynomial in standard form. Then determine the degree, number of terms, end behavior and number of u-turns (humps).

1) $y = 7x^2 - 5x^3 + 4x - 6x^2$

Stand. Form: _____

Degree: _____ Terms: _____

End. Beh: _____ U-turns: _____

2) $y = 14x^4 - 14x^8 + 14x - 14x$

Stand. Form: _____

Degree: _____ Terms: _____

End. Beh: _____ U-turns: _____

3) $y = -3x^2(2x - 5x^3 + 3x^2)$

Stand. Form: _____

Degree: _____ Terms: _____

End. Beh: _____ U-turns: _____

4) $y = (2x^2 - 5)(x^2 - 1)$

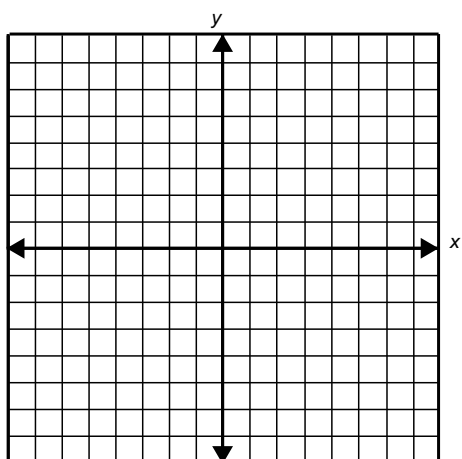
Stand. Form: _____

Degree: _____ Terms: _____

End. Beh: _____ U-turns: _____

Determine the sign of the leading coefficient and the degree of the polynomial function for each graph below:

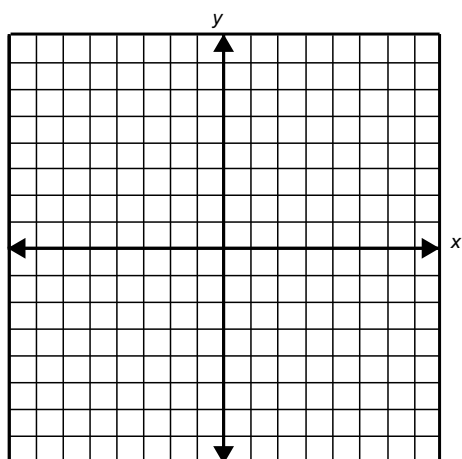
5)



Lead Coefficient: POSITIVE or NEGATIVE

Degree: _____

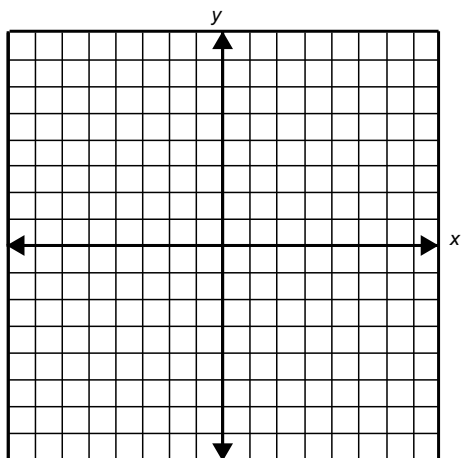
6)



Lead Coefficient: POSITIVE or NEGATIVE

Degree: _____

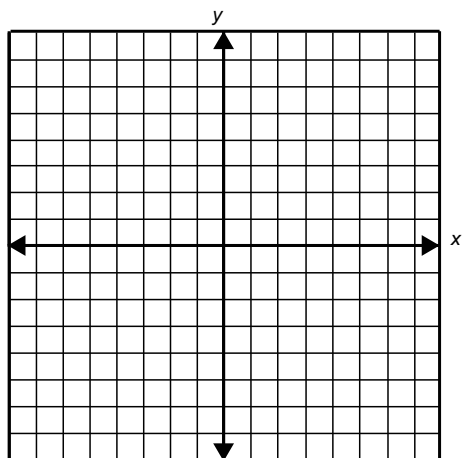
7)



Lead Coefficient: POSITIVE or NEGATIVE

Degree: _____

8)



Lead Coefficient: POSITIVE or NEGATIVE

Degree: _____

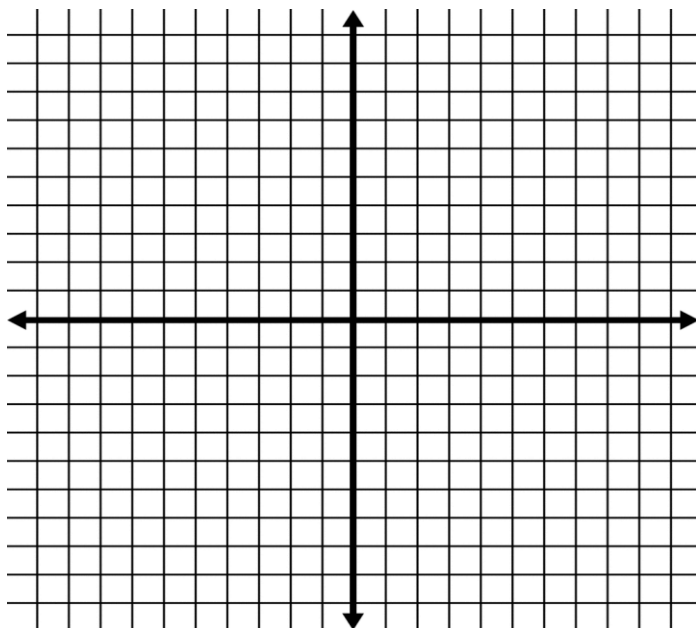
Graph each polynomial:

9) $y = -(x - 1)(x + 4)(x + 2)$

Zeros: _____

y-int: _____

End Behavior: _____

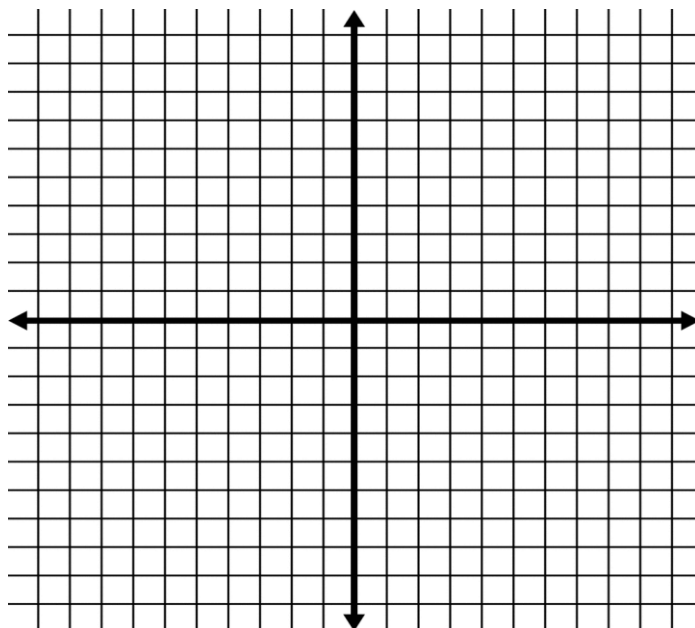


10) $y = -x(x + 3)(x - 5)(x + 7)$

Zeros: _____

y-int: _____

End Behavior: _____

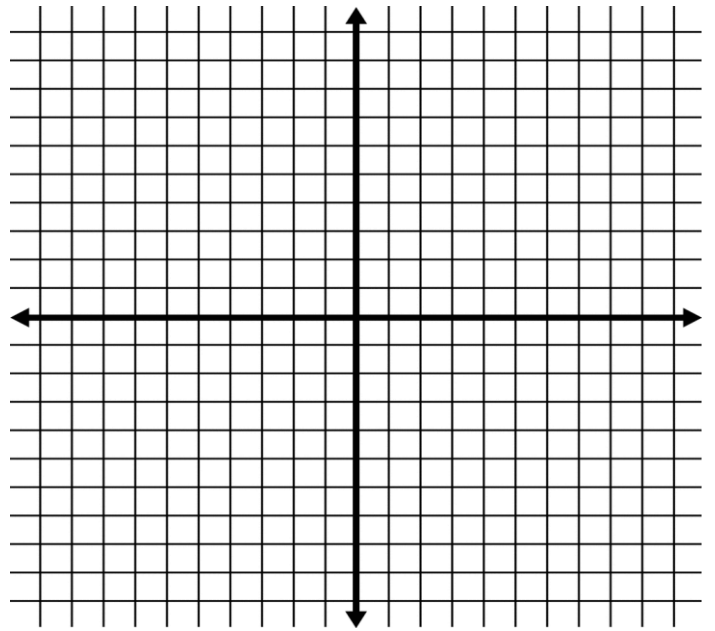


11) $y = x^3 - 5x^2 - 6x$

Zeros: _____

y-int: _____

End Behavior: _____

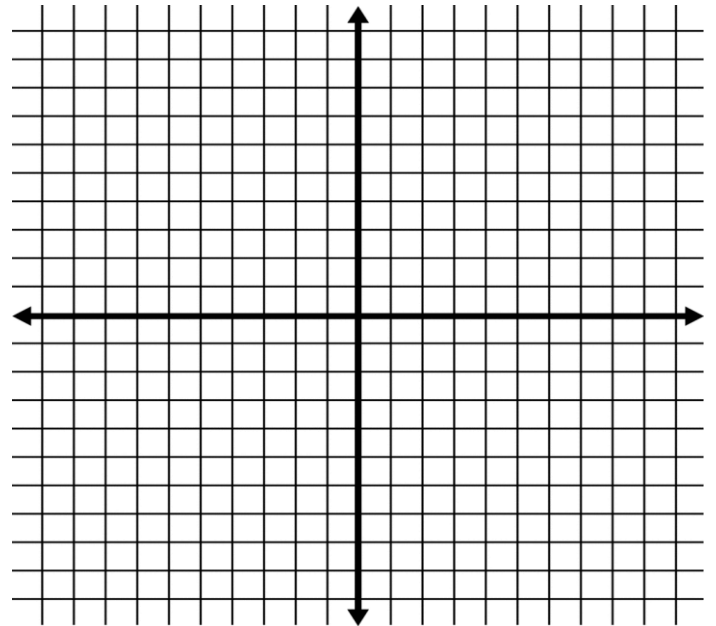


12) $y = 2x^3 + 10x^2 + 12x$

Zeros: _____

y-int: _____

End Behavior: _____

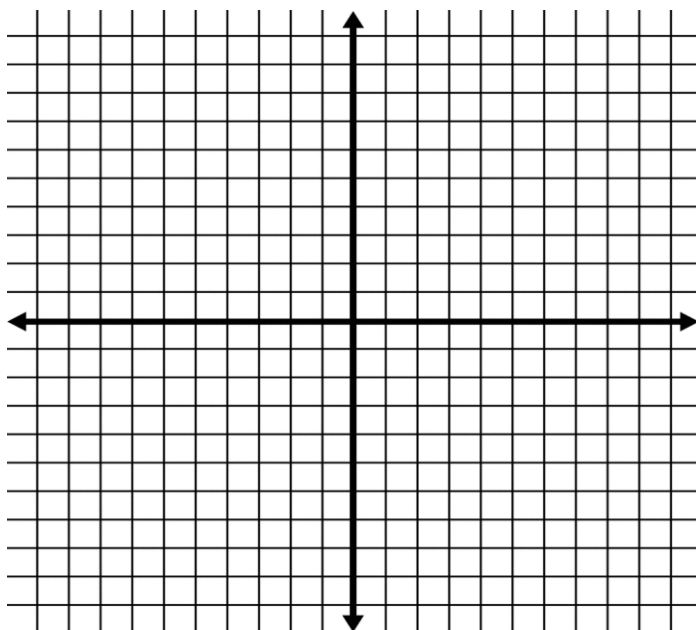


13) $y = -2x^3 + 12x^2 - 18x$

Zeros: _____

y-int: _____

End Behavior: _____

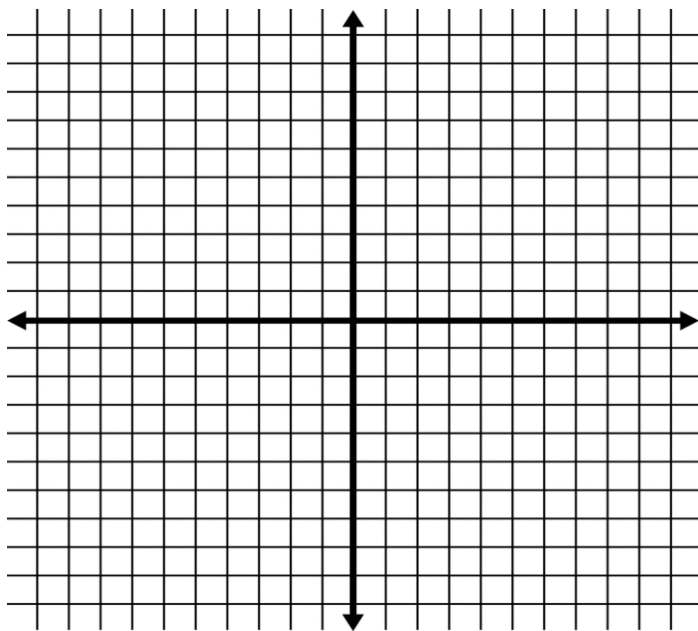


14) $y = x^4 - 25x^2$

Zeros: _____

y-int: _____

End Behavior: _____



Find the polynomial function, in standard form, given the following roots:

15) $x = 0, 2, 5$

16) $x = -4, -1, 5$

Polynomial: _____

Polynomial: _____

17) $x = 0, 0, 4, 7$

18) $x = -2, 0, 3, 6$

Polynomial: _____

Polynomial: _____